



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,974	09/23/2003	Norifumi Hasegawa		7883

7590 12/15/2004

LORUSSO, LOUD & KELLY  
3137 Mount Vernon Avenue  
Alexandria, VA 22305

EXAMINER

HAILEY, PATRICIA L

ART UNIT PAPER NUMBER

1755

DATE MAILED: 12/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/667,974

Applicant(s)

HASEGAWA, NORIFUMI

Examiner

Patricia L. Hailey

Art Unit

1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-17 and 19 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 6 and 11 is/are rejected.
- 7) ☐ Claim(s) 4, 7-10, and 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.


## Attachment(s)


- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4/27/04, 9/27/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: IDS filed 03/05/04.

### *Drawings*

1. The drawings are objected to because they contain informalities. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The informalities are as follows:

1. In Figures 2 and 3, the element  (i.e., the clear circle), is not defined in the legend of “Constituent elements”.

2. In Figure 3, the element  (i.e., the larger circle) is not defined in the legend of "Constituent elements". It appears that, based on the description of Figure 3, the larger circle should be ● (i.e., phosphorus).

### *Specification*

2. *The disclosure is objected to because of the following informalities:*

On page 1 of the Specification, lines 13 and 14, the sentence "A combination of the catalyst layer and the catalyst layer constitutes the electrodes of the fuel cell." is unclear.

On page 9 of the Specification, at line 14, "Na<sub>2</sub>Co<sub>3</sub>" should be "Na<sub>2</sub>CO<sub>3</sub>".

Appropriate correction is required.

---

### *Claim Rejections - 35 USC § 102/35 USC § 103*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at

Art Unit: 1755

the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. *Claims 1, 5, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Velasco et al. (U. S. Patent No. 4,731,705).*

7. *Claims 2, 3, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 USC § 103(a) as being obvious over Velasco et al. (U. S. Patent No. 4,731,705).*

Velasco et al. teach a cell for an electric double layer capacitor including a membrane formed from a solid protonic conducting electrolyte separating two electrodes, each of which is a composite electrode formed by a mixture of at least one electronic conductor and a solid electrolyte. See the Abstract of Velasco et al., as well as Figure 1, which shows a sectional view of Patentees' cell. The configurations of electrodes 1 and 2 and membrane 3 is considered to read upon the claim limitation "fixed".

Examples of the electrolyte include uranyl phosphate and zirconium phosphate, derivatives thereof, and other protonic conductors having high protonic conductivity. See col. 4, lines 15-35 of Velasco et al. This disclosure is considered to read upon the claim limitation "proton conductor".

With respect to the electrodes, which comprise at least one electronic conductor and a solid electrolyte, the solid electrolyte may be different from or identical to the one forming the aforementioned membrane, and the electronic conductor may be activated carbon black or acetylene black. See col. 4, lines 39-54 of Velasco et al.

In view of these teachings, Velasco et al. anticipate claims 1, 5, and 6.

With respect to claims 2, 3, and 11, Velasco et al. also anticipates these claims; however, these claims recite the phrase "obtained by", which adds to claims 2, 3, and 11 product-by-process limitations. In view of these limitations, it is considered that "[A]ny difference imparted by the product by process limitations would have been obvious to one having ordinary skill in the art at the time the invention was made because where the examiner has found a substantially similar product as in the applied prior art the burden of proof is shifted to the applicant to establish that their product is patentably distinct, not the examiner to show that the same is a process of making." In re Brown, 173 U.S.P.Q. 685 and In re Fessmann, 180 U.S.P.Q. 324.

*Allowable Subject Matter*

8. Claims 4, 7-10, and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claims 12-17 and 19 are allowed.

10. The following is a statement of reasons for the indication of allowable subject matter:

Velasco et al. do not teach or reasonably suggest the limitations of claims 4, 7-10, or 12-19. While the cell disclosed in Velasco et al. comprises what reads on the "electron conductor" and "proton conductor" as instantly claimed, the teachings of this reference do not encompass the limitations of claims 4 and 7-10. Further, while Velasco et al. teach a method for producing Patentees' cell discussed above (col. 5, lines 1-41), the reference does not meet the limitations of claims 12-19.

*Conclusion*

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

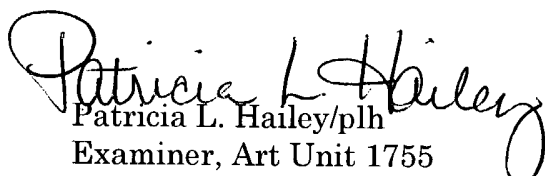
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia L. Hailey whose telephone number is (571) 272-1369. The examiner can normally be reached on Mondays-Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark L. Bell can be reached on (571) 272-1362. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group 1700 Receptionist, whose telephone number is (571) 272-1700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Patricia L. Hailey/plh  
Examiner, Art Unit 1755  
December 8, 2004

  
Mark L. Bell  
Supervisory Patent Examiner  
Technology Center 1700